Author Index

Aghajamian, M. K., 257 Albanese-Kotar, N. F., 233 Almasan, C., 181 Armacanqui, M. E., 143

Barlat, F., 55 Bassani, J. L., 19, 81 Beuers, J., 111 Breval, E., 257

Challenger, K. D., 1 Clark, D. E., 241 Cohen, J. B., L5

Datta, T., 181

Eckert, R., 19, 81 Edwards, D., 181 Elam, W. T., L13

Farrington, G. C., 125 Fletcher, A. J., 153 Fortnum, R. T., 223

Gooch, D. J., 45 Guonan, W., 39

Haicai, H., 39 Han, J. K., 73 Herman, H., L13 Ho, N. J., 161 Hong, S. I., 137 Hopgood, A. A., 105 Hsu, T. Y., (Xu Zuyao), 189

Inal, O. T., 217

Jaramillo, D., 217 Jennings, J. S., 257 Jha, S. C., 201 Jones, Jr., E. R., 181 Jönsson, S., 111

Kamen, J. S., 1 Kim, Y. G., 73 Kirkland, J. P., L13 Koo, Y. M., L5 Kumar, A. N., 29

Laird, C., 19, 81, 125 Ledbetter, H. M., 181 Lodding, A., 241

MacMillan, N. H.. 257 Martin, J. W., 105 Mikkola, D. E., 223, 233 Misra, R. D. K., L1

Neiser, R. A., L13 Odelius, H., 241 Oriani, R. A., 143 Owen, C. V., 97

Pandey, R. K., 29 Putatunda, S. K., 89

Rubel, M., L9

Sanders, Jr., T. H., 201 Sater, J. M., 201 Sayers, C. M., 195 Skelton, E. F., L13 Skelton, R. P., 1 Soomro, A. B., 153 Spitzig, W. A., 97 Sundaram, P., 29 Sundararajan, G., 169 Szecket, V. A., 217

Tirupataiah, Y., 169 Tjong, S. C., 161

Wei, K., 39 Werme, L. O., 241 Wetherhold, R. C., 7, 13

Xuemin, L., 189

Zhongguang, W., 39 Zhu, Z. Y., 125



Subject Index

Abresist

erosion of Abresist, 257

Aging

effect of aging on the yield stress of a single-crystal superalloy, 105

influence of dynamic strain aging on the creep ductility of solid solution alloys, 137

AISI 4130 steel

fatigue crack initiation and propagation in AISI 4130 steel exposed to neutral perchlorate solution, 125

Allovs

Auger electron spectroscopy of anodic oxide films on nickel-copper alloys, L1

effects of molybdenum, titanium and silicon additions on the DO₃ ≈ B2 transition temperature for alloys near Fe₃Al, 223

effect of the welding process and heat input on the fracture toughness of welded joints in high strength low alloy steel, 29

estimation of monocrystal elastic constants for an alloy of a cubic solvent and an hexagonal solute, L5

fracture mechanisms in Cu-O and Cu-Pb alloys fatigued with a positive mean stress, 19

influence of dynamic strain aging on the creep ductility of solid solution alloys, 137

investigation of phase transformation in a 50.8at.%Ni-Ti shape memory alloy, 189

low temperature magnetic properties of F.C.C. Fe-Cr-Ni alloys: effects of manganese and interstitial carbon and nitrogen, 181

microstructural characterization of rapidly solidified aluminium-transition metal alloys, 201

plasma-induced erosion of monocrystalline alloy surfaces, L9

plastic deformation in B.C.C. alloys induced by hydrogen concentration gradients, 143

transmission electron microscopy studies of the dislocation microstructures in fatigued Fe-8.7Al-29.7Mn-1.04C alloy, 161

Aluminium

low cycle fatigue behaviour of a cryogenic Fe-30Mn-5Al-0.1Nb-0.3C steel, 73

microstructural characterization of rapidly solidified aluminium-transition metal alloys, 201

transmission electron microscopy studies of the dislocation microstructures in fatigued Fe-8.7Al-29.7Mn-1.04C alloy, 161

Anisotropic yield surfaces

crystallographic texture, anisotropic yield surfaces and forming limits of sheet metals, 55

Anisotropy

effect of anisotropy on creep and creep crack growth in cold-worked C-Mn steel at 360 °C, 45 Auger electron spectroscopy

Auger electron spectroscopy of anodic oxide films on nickel-copper alloys, L1

Austenitic (AISI 304) stainless steel

corrosion behavior of sensitized austenitic (AISI 304) stainless steel in a CO₂ atmosphere, 89

B.C.C. alloys

plastic deformation in B.C.C. alloys induced by hydrogen concentration gradients, 143

Beryllium

dislocation structure in beryllium single-crystals deformed by prismatic slip, 111

Biased fiber distribution

probabilistic aspects of the strength of fiberdominated short-fiber composites II: biased fiber distribution, 13

Carbon

effect of anisotropy on creep and creep crack growth in cold-worked C-Mn steel at 360 °C, 45

low temperature magnetic properties of F.C.C. Fe-Cr-Ni alloys: effects of manganese and interstitial carbon and nitrogen, 181

transmission electron microscopy studies of the dislocation microstructures in fatigued Fe-8.7Al-29.7Mn-1.04C alloy, 161

Carbon dioxide

corrosion behavior of sensitized austenitic (AISI 304) stainless steel in a CO₂ atmosphere, 89

Chromium

effect of oxidation on fatigue crack growth in 2.25Cr-1Mo steel at 525 °C: a metallographic examination, 1

low temperature magnetic properties of F.C.C. Fe-Cr-Ni alloys: effects of manganese and interstitial carbon and nitrogen, 181

Cold-worked C-Mn steel

effect of anisotropy on creep and creep crack growth in cold-worked C-Mn steel at 360 °C, 45

Comminuted magnesium oxide

dissolution of comminuted magnesium oxide as affected by the density of dislocations introduced by various comminution methods, 233

Composites

probabilistic aspects of the strength of fiberdominated short-fiber composites I: aligned fibers, 7

probabilistic aspects of the strength of fiberdominated short-fiber composites II: biased fiber distribution, 13

thermal contraction stresses in cemented tungsten carbide composites, 195

[©] Elsevier Sequoia/Printed in The Netherlands

Composition

elemental analysis of Swedish nuclear waste glasses: leachability vs. composition, 241

Copper

Auger electron spectroscopy of anodic oxide films on nickel-copper alloys, L1

fracture mechanisms in Cu-O and Cu-Pb alloys fatigued with a positive mean stress, 19

mechanism of fracture produced by fatigue cycling with a positive mean stress in copper, 81

Corrosion behavior

corrosion behavior of sensitized austenitic (AISI 304) stainless steel in a CO₂ atmosphere, 89

Crack

effect of anisotropy on creep and creep crack growth in cold-worked C-Mn steel at 360 °C, 45

effect of oxidation on fatigue crack growth in 2.25Cr-1Mo steel at 525 °C: a metallographic examination, 1

fatigue crack initiation and propagation in AISI 4130 steel exposed to neutral perchlorate solution, 125

Creep

effect of anisotropy on creep and creep crack growth in cold-worked C-Mn steel at 360 °C, 45

influence of dynamic strain aging on the creep ductility of solid solution alloys, 137

Cryogenic Fe-20Mn-5Al-0.1Nb-0.3C steel low cycle fatigue behaviour of a cryogenic Fe-30Mn-5Al-0.1Nb-0.3C steel, 73

Crystallographic

crystallographic texture, anisotropic yield surfaces and forming limits of sheet metals, 55

Crystals

dislocation structure in beryllium single-crystals deformed by prismatic slip, 111

Cubic solvent

estimation of monocrystal elastic constants for an alloy of a cubic solvent and an hexagonal solute, L5

Deformation

plastic deformation in B.C.C. alloys induced by hydrogen concentration gradients, 143

Dislocation

dislocation structure in beryllium single-crystals deformed by prismatic slip, 111

dissolution of comminuted magnesium oxide as affected by the density of dislocations introduced by various comminution methods, 233

transmission electron microscopy studies of the dislocation microstructures in fatigued Fe-8.7Al-29.7Mn-1.04C alloy, 161

Dissolution

dissolution of comminuted magnesium oxide as affected by the density of dislocations introduced by various comminution methods, 233

Dual-phase steel

influence of the martensite content on the fatigue behaviour of a dual-phase steel, 39 Dynamic strain aging

influence of dynamic strain aging on the creep ductility of solid solution alloys, 137

Elemental analysis

elemental analysis of Swedish nuclear waste glasses: leachability vs. composition, 241

Erosion

erosion of Abresist, 257

plasma-induced erosion of monocrystalline alloy surfaces, L9

Explosive welding

transition from a waveless to a wavy interface in explosive welding, 217

Fatigue

fatigue crack initiation and propagation in AISI 4130 steel exposed to neutral perchlorate solution, 125

influence of the martensite content on the fatigue behaviour of a dual-phase steel, 39

low cycle fatigue behaviour of a cryogenic Fe-30Mn-5Al-0.1Nb-0.3C steel, 73

Fatigue crack growth

effect of oxidation on fatigue crack growth in 2.25Cr-1Mo steel at 525 °C: a metallographic examination, 1

Fatigue cycling

mechanism of fracture produced by fatigue cycling with a positive mean stress in copper, 81

F.C.C. Fe-Cr-Ni alloys

low temperature magnetic properties of F.C.C. Fe-Cr-Ni alloys: effects of manganese and interstitial carbon and nitrogen, 181

Fibers

probabilistic aspects of the strength of fiberdominated short-fiber composites I: aligned fibers, 7

Fiber-dominated short-fiber composites

probabilistic aspects of the strength of fiberdominated short-fiber composites I: aligned fibers, 7

probabilistic aspects of the strength of fiberdominated short-fiber composites II; biased fiber distribution, 13

Films

Auger electron spectroscopy of anodic oxide films on nickel-copper alloys, L1

Fracture

mechanism of fracture produced by fatigue cycling with a positive mean stress in copper, 81

Fracture mechanisms

fracture mechanisms in Cu-O and Cu-Pb alloys fatigued with a positive mean stress, 19

Fracture toughness

effect of the welding process and heat input on the fracture toughness of welded joints in high strength low alloy steel, 29

Glasses

elemental analysis of Swedish nuclear waste glasses: leachability vs. composition, 241 Hexagonal solute

estimation of monocrystal elastic constants for an alloy of a cubic solvent and an hexagonal solute, L5

Hydrogen

plastic deformation in B.C.C. alloys induced by hydrogen concentration gradients, 143

Indentation

comprehensive analysis of the static indentation process, 169

Iron

low cycle fatigue behaviour of a cryogenic Fe-30Mn-5Al-0.1Nb-0.3C steel, 73

low temperature magnetic properties of F.C.C. Fe-Cr-Ni alloys: effects of manganese and interstitial carbon and nitrogen, 181

transmission electron microscopy studies of the dislocation microstructures in fatigued Fe-8.7Al-29.7Mn-1.04C alloy, 161

Iron aluminide

effects of molybdenum, titanium and silicon additions on the DO₃ ≠ B2 transition temperature for alloys near Fe₃Al, 223

effect of the welding process and heat input on the fracture toughness of welded joints in high strength low alloy steel, 29

Leachability

elemental analysis of Swedish nuclear waste glasses: leachability vs. composition, 241

Lead

fracture mechanisms in Cu-O and Cu-Pb alloys fatigued with a positive mean stress, 19

Magnesium oxide

dissolution of comminuted magnesium oxide as affected by the density of dislocations introduced by various comminution methods, 233 Magnetic properties

low temperature magnetic properties of F.C.C. Fe-Cr-Ni alloys: effects of manganese and interstitial carbon and nitrogen, 181

Manganese

effect of anisotropy on creep and creep crack growth in cold-worked C-Mn steel at 360 °C, 45 low cycle fatigue behaviour of a cryogenic Fe-

30Mn-5Al-0.1Nb-0.3C steel, 73

low temperature magnetic properties of F.C.C. Fe-Cr-Ni alloys: effects of manganese and interstitial carbon and nitrogen, 181

transmission electron microscopy studies of the dislocation microstructures in fatigued Fe-8.7Al-29.7Mn-1.04C alloy, 161

Martensite

influence of the martensite content on the fatigue behaviour of a dual-phase steel, 39

Mechanical behavior

effect of the nitrogen-to-hydrogen ratio on the mechanical behavior of vanadium, niobium and tantalum, 97

Metallographic examination

effect of oxidation on fatigue crack growth in 2.25Cr-1Mo steel at 525 °C: a metallographic examination, 1

Metals

crystallographic texture, anisotropic yield surfaces and forming limits of sheet metals, 55

Microstructural characterization

microstructural characterization of rapidly solidified aluminium-transition metal alloys, 201

Microstructures

transmission electron microscopy studies of the dislocation microstructures in fatigued Fe-8.7Al-29.7Mn-1.04C alloy, 161

Molybdenum

effects of molybdenum, titanium and silicon additions on the DO₃ ≠ B2 transition temperature for alloys near Fe₃Al, 223

effect of oxidation on fatigue crack growth in 2.25Cr-1Mo steel at 525 °C: a metallographic examination. 1

Monocrystal elastic constants

estimation of monocrystal elastic constants for an alloy of a cubic solvent and an hexagonal solute, L5

Monocrystalline alloy surfaces

plasma-induced erosion of monocrystalline alloy surfaces, L9

Nickel

Auger electron spectroscopy of anodic oxide films on nickel-copper alloys, L1

investigation of phase transformation in a 50.8at.% Ni-Ti shape memory alloy, 189

low temperature magnetic properties of F.C.C. Fe-Cr-Ni alloys: effects of manganese and interstitial carbon and nitrogen, 181

effect of the nitrogen-to-hydrogen ratio on the mechanical behavior of vanadium, niobium and tantalum. 97

low cycle fatigue behaviour of a cryogenic Fe-30Mn-5Al-0.1Nb-0.3C steel, 73

Nitrogen

low temperature magnetic properties of F.C.C. Fe-Cr-Ni alloys: effects of manganese and interstitial carbon and nitrogen, 181

Nitrogen-to-hydrogen

effect of the nitrogen-to-hydrogen ratio on the mechanical behavior of vanadium, niobium and tantalum, 97

Nuclear waste glasses

elemental analysis of Swedish nuclear waste glasses: leachability vs. composition, 241

Oxidation

effect of oxidation on fatigue crack growth in 2.25Cr-1Mo steel at 525 °C: a metallographic examination, 1

Oxides

plasma sprayed superconducting oxides, L13

Oxygen

fracture mechanisms in Cu-O and Cu-Pb alloys fatigued with a positive mean stress, 19

Perchlorate

fatigue crack initiation and propagation in AISI 4130 steel exposed to neutral perchlorate solution, 125

Phase transformation

investigation of phase transformation in a 50.8-at.%Ni-Ti shape memory alloy, 189

Plasma-induced erosion

plasma-induced erosion of monocrystalline alloy surfaces, L9

Plasma sprayed superconducting oxides, L13 Plastic

plastic deformation in B.C.C. alloys induced by hydrogen concentration gradients, 143

Polyalkylene glycol

generation of thermal stress and strain during the quenching of steel plates in polyalkylene glycol, 153

Prismatic slip

the dislocation structure in beryllium single-crystals deformed by prismatic slip, 111

Quenching

generation of thermal stress and strain during the quenching of steel plates in polyalkylene glycol, 153

Steels

corrosion behavior of sensitized austenitic (AISI 304) stainless steel in a CO₂ atmosphere, 89 effect of anisotropy on creep and creep crack growth in cold-worked C-Mn steel at 360 °C, 45 effect of oxidation on fatigue crack growth in

2.25Cr-1Mo steel at 525 °C: a metallographic examination, 1

effect of the welding process and heat input on the fracture toughness of welded joints in high strength low alloy steel, 29

generation of thermal stress and strain during the quenching of steel plates in polyalkylene glycol, 153

influence of the martensite content on the fatigue behaviour of a dual-phase steel, 39

low cycle fatigue behaviour of a cryogenic Fe-30Mn-5Al-0.1Nb-0.3C steel, 73

Sheet metals

crystallographic texture, anisotropic yield surfaces and forming limits of sheet metals, 55

Silicor

effects of molybdenum, titanium and silicon additions on the $DO_3 \rightleftharpoons B2$ transition temperature for alloys near Fe₃Al, 223

Single-crystal superalloy

effect of aging on the yield stress of a single-crystal superalloy, 105

Slip

dislocation structure in beryllium single-crystals deformed by prismatic slip, 111

Solid solution alloys

influence of dynamic strain aging on the creep ductility of solid solution alloys, 137

Solidified aluminium-transition metal alloys microstructural characterization of rapidly solidified aluminium-transition metal alloys, 201 Solvent

estimation of monocrystal elastic constants for an alloy of a cubic solvent and an hexagonal solute, L5

Static indentation process

comprehensive analysis of the static indentation process, 169

Strain

generation of thermal stress and strain during the quenching of steel plates in polyalkylene glycol, 153

Strength

probabilistic aspects of the strength of fiberdominated short-fiber composites I: aligned fibers, 7

probabilistic aspects of the strength of fiberdominated short-fiber composites II: biased fiber distribution, 13

Stress

effect of aging on the yield stress of a single-crystal superalloy, 105

fracture mechanisms in Cu-O and Cu-Pb alloys fatigued with a positive mean stress, 19

generation of thermal stress and strain during the quenching of steel plates in polyalkylene glycol, 153

mechanism of fracture produced by fatigue cycling with a positive mean stress in copper, 81

Stresses

thermal contraction stresses in cemented tungsten carbide composites, 195

Superconducting oxides

plasma sprayed superconducting oxides, L13

Surfaces

crystallographic texture, anisotropic yield surfaces and forming limits of sheet metals, 55 plasma-induced erosion of monocrystalline alloy surfaces, L9

Tantalum

effect of the nitrogen-to-hydrogen ratio on the mechanical behavior of vanadium, niobium and tantalum, 97

Thermal contraction stresses

thermal contraction stresses in cemented tungsten carbide composites, 195

Thermal stress

generation of thermal stress and strain during the quenching of steel plates in polyalkylene glycol, 153

Titanium

effects of molybdenum, titanium and silicon additions on the DO₃ ≠ B2 transition temperature for alloys near Fe₃Al, 223

investigation of phase transformation in a 50.8at.%Ni-Ti shape memory alloy, 189

Transition

transition from a waveless to a wavy interface in explosive welding, 217

Transition metal

microstructural characterization of rapidly solidified aluminium-transition metal alloys, 201

Transmission electron microscopy

transmission electron microscopy studies of the dislocation microstructures in fatigued Fe-8.7Al-29.7Mn-1.04C alloy, 161

Transition temperature

effects of molybdenum, titanium and silicon additions on the DO₃ ≠ B2 transition temperature for alloys near Fe₃Al, 223

Tungsten carbide

thermal contraction stresses in cemented tungsten carbide composites, 195

Vanadium

effect of the nitrogen-to-hydrogen ratio on the mechanical behavior of vanadium, niobium and tantalum, 97 Waveless interface

transition from a waveless to a wavy interface in explosive welding, 217

Wavy interface

transition from a waveless to a wavy interface in explosive welding, 217

Welding

effect of the welding process and heat input on the fracture toughness of welded joints in high strength low alloy steel, 29

transition from a waveless to a wavy interface in explosive welding, 217

